In the Specification

Please amend the paragraphs identified below by paragraph number in the manner shown:

[0009] In thermally enhanced PSA (TEPSA), desorption occurs by feeding a regeneration gas at a pressure lower than the feed gas and at a temperature greater than it and subsequently replacing the hot regeneration gas by a cold regeneration gas. The heated regeneration gas allows the cycle time to be extended as compared to that of a PSA system so reducing switch losses as heat generated by adsorption within the bed may be replaced in part by the heat from the hot regeneration gas. A TEPSA process is described in U.S. Pat. No. 5,614,000.

[0010] TSA, TPSA and TEPSA systems require the input of thermal energy and may require the use of insulated vessels, a regeneration gas preheater and an inlet end precooler and generally the high temperatures impose a more stringent and costly mechanical specification for the system. In operation, there is extra energy cost associated with using the preheater.

[0016] To increase capacity, a "four bed" configuration may be used in a TSA process in which two beds are on line with two beds being regenerated at the same time and the regenerated beds then being placed on-line and the other, exhausted beds being regenerated to provide a high throughput. The four beds are typically [~~are~~] operated as two pairs of beds and the phasing of the adsorption/regeneration cycle of the two pairs need not be co-ordinated. In this way four simple vessels having a conventional geometry and design may be used to avoid difficulties of pressure drops and transportation which could be encountered if larger scale equipment were to be employed. This approach however requires significant capital investment and adds to the complexities of design of a large scale separation unit.

[0044] The regeneration of the adsorbent is suitably carried out using a regeneration gas at a temperature above the bed adsorption temperature, suitably at a temperature of 0 to 400 °C, preferably from 40 to 200 °C

[0052] The present invention may be employed in combination with otherwise conventional air separation plant and other apparatus for gas separation. The invention also has applicability in other fields including remote applications, for example shipboard applications, where oxygen storage may be subject to safety scrutiny. The invention provides advantage in applications

where continuous supply of a gas to a downstream process is important for economic, safety or other reasons. For example the need for reliability of supply of oxygen for a [~~the~~] downstream Fisher Tropsch or methanol production process is important and the present invention provides a safety benefit by being operable in a conventional mode, that is using a pair of beds in the event that the third vessel is inoperative for example in an emergency or due to scheduled process down-time.

[0058] Apparatus for use in accordance with the present invention shown in FIG. 2 comprises three beds of adsorbent 1, 2 and 3 arranged in parallel. Each is connected via a respective inlet valve 4, 5 and 6 to an inlet manifold 7 connected to a source 8 of feed gas. The inlet end of each of the beds 1, 2 and 3 is also connected to a first venting manifold 9 via respective venting valves 10, 11 and 12. The outlet from each of the beds 1, 2 and 3 is connected via a respective outlet valve 13, 14 and 15 to an outlet manifold 16 which is connected to a downstream processing apparatus such as the cold box of an air separation unit 17. Regeneration gas for example from an air separation unit is supplied to the apparatus of FIG. 2 at an input 18 via a heater 19 which is periodically switched on to provide a heated pulse of regeneration gas and is connected to the outlet end of each bed 1, 2 and 3 for counter-current purging flow via a respective inlet valve[s] 20, 21 and 22. The outlets of the beds 1, 2 and 3 are interconnected amongst themselves via valves 23, 24 and 25 to allow flow of repressurisation gas from outlet manifold 16. The operation of the control valves is controlled in a known manner by appropriate control means, not illustrated, but in a novel sequence to provide the phased adsorption cycles for the beds 1, 2 and 3.